CLAIMS

1. A method of locating a subscriber terminal in a packet-switched radio system, comprising

the core network of the radio system transmitting a location service request message to the radio network of the radio system;

the radio network transmitting information to a subscriber terminal in a paging message that the subscriber terminal is requested to initiate the location service;

the subscriber terminal that received the paging message transmitting a paging response message to the radio network;

the radio network transmitting the paging response message to the core network;

the network part locating the subscriber terminal on the basis of the information included in the paging response message.

2. A method according to claim 1, wherein the information included in the paging response message comprises identity of the serving cell, and/or timing information on the radio connection, and/or other information on the radio system or on the subscriber terminal.

3. A method according to claim 2, wherein the other information comprises at least one of the following parameters: receiving power of the serving cell, receiving power of at least one neighboring cell, charge level of the battery in the subscriber terminal, information on the conditions at the location of the subscriber terminal, information on a previous location of the subscriber terminal.

4. A method according to claim 1, wherein at least part of the information included in the paging response message received by the core network has been inserted into the paging response message by the subscriber terminal.

5. A method according to claim 1, wherein at least part of the information included in the paging response message received by the core network has been inserted into the paging response message by the radio network.

6. A method according to claim 1, wherein the subscriber terminal initiates the functions required by the location service after it has received the paging message.

7. A method according to claim 6, wherein the functions required by the location service comprise receiving signals in the subscriber terminal and measuring them, or transmitting signals from the subscriber terminal.

8. A method according to claim 7, wherein the signals received in the subscriber terminal for implementing the location service comprise signals transmitted by the radio system, including signals transmitted by other base stations of the radio system than by that of the serving cell, or the signals transmitted by a satellite of the GPS system.

9. A method according to claim 6, wherein the subscriber terminal continues performance of the functions required by the location service after it has transmitted the paging response message.

10. A method according to claim 1, wherein the network part checks whether the location of the subscriber terminal carried out corresponds to the target set for the quality of service.

11. A method according to claim 10, wherein, if the target set for the quality of service is not achieved, the network part will perform a location service which offers a better quality of service.

12. A method according to claim 1, wherein the paging message is transmitted even though the subscriber terminal would already be on standby due to a paging message received earlier.

13. A method according to claim 1, wherein the paging message and the paging response message are messages of protocol layers that correspond to the third layer of the OSI model.

14. A packet-switched radio system comprising:

a network part of the radio system, which comprises a core network, and a radio network connected to the core network,

a radio connection from the radio network to a subscriber terminal; and

the network part comprising location service means for locating the subscriber terminal; and

the network part comprises means for transmitting a location service request message to the radio network;

the radio network comprises paging means for transmitting information to the subscriber terminal in a paging message that the subscriber terminal is requested to initiate the location service;

the subscriber terminal comprises means for transmitting a paging response message to the radio network after it has received the paging message;

the radio network comprises means for transmitting the paging response message to the core network;

the network part of the radio system comprises means for locating the subscriber terminal on the basis of the information included in the paging response message.

15. A radio system according to claim 14, wherein the information included in the paging response message comprises identity of the serving cell, and/or timing information on the radio connection, and/or other information on the radio system or on the subscriber terminal.

16. A radio system according to claim 15, wherein the other information comprises at least one of the following parameters: receiving power of the serving cell, receiving power of at least one neighboring cell, charge level of the battery in the subscriber terminal, information on the conditions at the location of the subscriber terminal, information on a previous location of the subscriber terminal.

17. A radio system according to claim 14, wherein the subscriber terminal comprises means for inserting at least part of the information included in the paging response message received by the core network has been into the paging response message by the subscriber terminal.

18. A radio system according to claim 14, wherein the subscriber terminal comprises means for inserting at least part of the information included in the paging response message received by the core network has been into the paging response message by the radio network.

19. A radio system according to claim 14, wherein the subscriber terminal comprises means for initiating the functions required by the location service after it has received the paging message.

20. A radio system according to claim 19, wherein the functions required by the location service comprise receiving signals in the subscriber terminal and measuring them, or transmitting signals from the subscriber terminal.

21. A radio system according to claim 20, wherein the signals received in the subscriber terminal for implementing the location service comprise signals transmitted by the radio system, including signals transmitted by

other base stations of the radio system than by that of the serving cell, or the signals transmitted by a satellite of the GPS system.

22. A radio system according to claim 19, wherein the subscriber terminal comprises means for continuing the functions required by the location service after it has transmitted the paging response message.

23. A radio system according to claim 14, wherein the network part comprises means for checking whether the location of the subscriber terminal carried out corresponds to the target set for the quality of service.

24. A radio system according to claim 23, wherein, if the target set for the quality of service is not achieved, the network part comprises means for performing a location service which offers a better quality of service.

25. A radio system according to claim 14, wherein the paging means transmit a paging message even though the subscriber terminal would already be on standby due to a paging message received earlier.

26. A radio system according to claim 14, wherein the paging message and the paging response message are messages of protocol layers that correspond to the third layer of the OSI model.